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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,537	03/31/2004	Peter Michael Edie	140362-1/YOD GERD:0119	7415
7590 08/23/2005			EXAMINER	
Patrick S. Yoder FLETCHER YODER P.O. Box 692289 Houston, TX 77269-2289			SUCHECKI, KRYSZYNA	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/814,537

Applicant(s)

EDIE ET AL.

Examiner

Krystyna Suchecki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/31/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1,10, 11, 12, 13, 19, 21, 22, 23, 24 are objected to because of the following informalities: Claims 1,10, 11, 12, 13, 19, 22, 23 and 24 are objected to since it is not clear how “one” [single] radiation source is distributed and substantially “surrounds” a portion of an imaging volume. Claims 10, 11 and 18 are objected to for “aperature,” which should be “aperture.” Claim 19 is additionally objected to since “the plurality of projection images” does not have proper antecedence within the claim. Claim 21 appears to be a duplicate of Claim 20, and therefor fail to add a new limitation to the claims as a whole. Claims 23 and 24 are objected since “at least one of the radiation source” is grammatically incorrect. A suggestion would be to have “at least one of the one or more distributed radiation sources.” Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-13 and 19-32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for CT imaging systems, does not reasonably provide enablement for any and all types of imaging systems, such as ultrasound or acoustic imaging systems. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The specification states that the invention relates to the field of computed

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tomography and specifically to stationary CT. The specification teaches only x-ray CT embodiments. Though the specification includes a sweeping statement that the invention can be adapted, no examples or explanations beyond x-ray CT systems has been included in the specification. The claims should therefor be drawn to at least stationary <sup>~ ray</sup> computed tomography systems.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-22 and 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Tschunt (US 4,437,624).

6. Regarding Claims 1-18, 22 and 25-30, Tschunt teaches a stationary CT imaging system and method for same comprising: one or more distributed X-ray radiation sources (1) substantially surrounding a desired portion of an imaging volume and configured to emanate an X-ray radiation beam (14) from a plurality of individual source positions around the imaging volume; and one or more sections of one or more detectors (15), arranged generally across from respective X-ray sources to receive a transmitted X-ray beam that has illuminated a desired portion of an imaging volume, configured to at least one of displace, nutate or move transversely for at least one of: allowing the radiation beam to illuminate the desired portion of the imaging volume by opening at least one individual aperture for the one or more distributed radiation sources to emanate the radiation beam; and intercepting the radiation beam by covering at least a

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portion of the aperture of at least one different individual source position located generally opposite to the one or more distributed radiation sources emanating the radiation beam (Column 3, line 43- Column 4, line 9). Tschunt teaches the opening and closing of an aperture since the detector (receiver) oscillates (swivels, or nutates) across (moves transversely to) the source path (Figure 2). The receiver blocks the opening (aperture) in the system for the source at the top of Figure 2, while clearing an opening (aperture) for the source in the bottom portion of the Figure. The motion of the detectors continues along the ring so that adjacent sources sequentially experience covered and uncovered states (Column 3, line 43- Column 4, line 9). A section of the detector is also configured to at least one of nutate or move transversely to cover at least a portion of an aperture for one or more adjacent X-ray sources located generally opposite to an X-ray source emanating the X-ray beam (Figure 2 and Column 3, line 21- Column 4, line 9).

7. Regarding Claims 19-21, Tschunt teaches an imaging systems as above for claims 13-18 and additionally teaches a control circuit (9) operably coupled to the source; a motor controller configured to displace the detector (Column 3, line 21- Column 4, line 9); a processing circuit (in item 25) operably coupled to the detector configured to receive a plurality of projection images and to form one or more reconstructed slices representative of the volume being imaged; and an operator workstation operably coupled to the processing circuit configured to display the one or more reconstructed slices (Column 4, lines 10-23).

8. Claims 23, 24, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Bagby (US 4,206,362).

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9. Regarding Claims 23, 24, 31 and 32, Bagby teaches an imaging system and method of scanning a volume to be imaged comprising: one or more distributed, triggered radiation sources (1, 11) substantially surrounding a desired portion of an imaging volume and configured to emanate a radiation beam from a plurality of individual source positions around the imaging volume; and one or more detectors (5a, 5a', 5n, 5n') configured to receive a transmitted radiation beam, wherein at least one of the radiation source is displaceable or nutated to allow illumination of the desired portion of the imaging volume and for the detector to receive the transmitted radiation beam (Column 3, lines 19-27).

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. LeMay (US 4,126,786) is of interest for teaching plates around detectors moving to expose the detectors to source radiation. Rohmfeld (US 4,153,842) is of interest for teachings of Figure 3, where a detector can be actuated into the source beam area by way of magnets, cam plates or slides. Rauch (US 4,592,080) is of interest for teaching pivoting detector plates for cooperation with a rotating source. Merriam-Webster's definitions of "nutation" and "transverse" have been included as a courtesy to show Examiner's interpretation of the terms.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krystyna Suchecki whose telephone number is (571) 272-2495. The examiner can normally be reached on M-F, 9-5.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KS

Craig E Church

Craig E. Church  
Primary Examiner